

IN THE CLAIMS

- 1-20. (Canceled)
21. (Currently amended) A method for purifying RNA from biological material comprising RNA, comprising the steps of:
- (a) mixing said biological material with an RNA Lysing Solution buffered at a pH of greater than about 7, said RNA Lysing Solution comprising an amphiphilic reagent, and an RNA complexing salt, wherein the RNA-complexing salt is an alkali-metal salt present at a concentration greater than about 4 M, wherein said RNA Lysing Solution is free of a strong chaotropic substance;
 - (b) lysing said biological material with said RNA Lysing Solution to form a lysate comprising nucleic acids comprising RNA and non-nucleic acid biological matter;
 - (c) contacting said lysate to an immobilized non-silica solid support, wherein said nucleic acids comprising RNA in said lysate preferentially bind to said solid support;
 - (d) washing said solid support with an RNA wash solution to remove non-nucleic acid biological matter; and
 - (e) preferentially eluting the bound RNA from said solid support with an RNA elution solution to obtain the RNA.
22. (Original) The method of claim 21, wherein the biological material is selected from the group consisting of crude and partially purified mixtures of nucleic acids.
23. (Original) The method of claim 21, wherein the biological material is selected from the group consisting of eukaryotic cells, prokaryotic cells, microbial cells, bacterial cells, plant cells, mycoplasma, protozoa, bacteria, fungi, viruses, yeasts, rickettsia and homogenates thereof.
24. (Original) The method of claim 21, wherein the biological material is selected from the

group consisting of whole blood, bone marrow, blood spots, blood serum, blood plasma, buffy coat preparations, saliva, cerebrospinal fluid, and solid animal tissues.

25. (Original) The method of claim 21, wherein the biological material is selected from the group consisting of feces, urine, tears, and sweat.
26. (Original) The method of claim 21, wherein the biological material is selected from the group consisting of environmental samples taken from air, water, sediment and soil.
27. (Original) The method of claim 21, wherein the non-silica solid support comprises components selected from a group consisting of cellulose, cellulose acetate, nitrocellulose, nylon, polyester, polyethersulfone, polyolefin, polyvinylidene fluoride, and combinations thereof.
28. (Original) The method of claim 21, wherein the non-silica solid support comprises a polyester.
29. (Original) The method of claim 21, wherein the immobilized non-silica solid support comprises combinations of polyesters.
30. (Previously presented) The method of claim 21, wherein the solid support is contained in a vessel.
31. (Previously presented) The method of claim 21, wherein the RNA Lysing Solution is free of guanidinium salts and urea.
32. (Previously presented) The method of claim 21, wherein the RNA is RNA selected from the group consisting of messenger RNA, transfer RNA, ribosomal RNA and viral RNA, and combinations thereof.
33. (Canceled)

34. (Currently amended) The method of claim 21 ~~33~~, wherein the alkali-metal salt is chosen from the group consisting of sodium, potassium, lithium, cesium, and rubidium salts.
35. (Currently amended) The method of claim 34 ~~33~~, wherein the alkali-metal salt is a lithium salt.
36. (Currently amended) The method of claim 35 ~~33~~, wherein the alkali-metal salt is lithium chloride
37. (Canceled)
38. (Currently amended) The method of claim 21 ~~33~~, wherein the alkali-metal salt is present at a concentration of between 4 - 10 M.
39. (Previously presented) The method of claim 21, wherein the amphiphillic reagent is a detergent.
40. (Original) The method of claim 39, wherein the detergent is a non-ionic detergent
41. (Original) The method of claim 40, wherein the nonioinic detergent is selected from the group consisting of tweens, tritons, nomodets, and tergitols.
42. (Previously presented) The method of claim 21, wherein the RNA Lysing Solution comprises a chelating agent.
43. (Original) The method of claim 42, wherein the chelating agent is selected from the group consisting of EDTA and CDTA.
44. (Canceled)

45. (Currently amended) A method for purifying RNA from biological material, comprising the steps of:
- (a) contacting a biological material containing RNA with a solid support pre-treated with an RNA Lysing Solution buffered at a pH of greater than about 7, wherein the RNA Lysing Solution is bound to the solid support, said RNA Lysing Solution comprising an amphiphilic reagent and an RNA-complexing salt, wherein the RNA-complexing salt is an alkali-metal salt present at a concentration greater than about 4 M, wherein said RNA Lysing Solution is free of a strong chaotropic substance;
 - (b) contacting said biological material to said solid support in order to release nucleic acids comprising RNA and non-nucleic acid biological matter causing nucleic acids comprising RNA to preferentially bind to said solid support;
 - (c) washing said solid support with an RNA wash solution to remove biological materials other than bound nucleic acids comprising RNA; and
 - (d) preferentially eluting the bound RNA from said solid support with an RNA elution solution to obtain the RNA.
46. (Previously presented) The method of claim 21, wherein the RNA that is purified is substantially undegraded RNA.
47. (Previously presented) The method of claim 30, wherein the vessel is a centrifuge tube, spin tube, syringe, cartridge, chamber, multiple-well plate or test tube.
48. (Previously presented) The method of claim 21, wherein the biological material is selected from the group consisting of crude and partially purified mixtures of nucleic acids.
49. (Previously presented) The method of claim 45, wherein the biological material is selected from the group consisting of eukaryotic cells, prokaryotic cells, microbial cells, bacterial cells, plant cells, mycoplasma, protozoa, bacteria, fungi, viruses, yeasts,

rickettsia and homogenates thereof.

50. (Previously presented) The method of claim 45, wherein the biological material is selected from the group consisting of whole blood, bone marrow, blood spots, blood serum, blood plasma, buffy coat preparations, saliva, cerebrospinal fluid, and solid animal tissues.
51. (Previously presented) The method of claim 45, wherein the biological material is selected from the group consisting of feces, urine, tears, and sweat.
52. (Previously presented) The method of claim 45, wherein the biological material is selected from the group consisting of environmental samples taken from air, water, sediment and soil.
53. (Previously presented) The method of claim 45, wherein the solid support is a non-silica solid support
54. (Previously presented) The method of claim 53, wherein the non-silica solid support comprises components selected from the group consisting of cellulose, cellulose acetate, nitrocellulose, nylon, polyester, polyethersulfone, polyolefin, polyvinylidene fluoride, and combinations thereof.
55. (Previously presented) The method of claim 53, wherein the non-silica solid support comprises a polyester.
56. (Previously presented) The method of claim 45, wherein the immobilized non-silica solid support comprises combinations of polyesters.
57. (Previously presented) The method of claim 45, wherein the solid support is contained in a vessel.

58. (Previously presented) The method of claim 45, wherein the RNA Lysing Solution is free of guanidinium salts and urea.
59. (Previously presented) The method of claim 45, wherein the RNA is RNA selected from the group consisting of messenger RNA, transfer RNA, ribosomal RNA and viral RNA, and combinations thereof.
60. (Canceled)
61. (Currently amended) The method of claim 45 ~~60~~, wherein the alkali-metal salt is chosen from the group consisting of sodium, potassium, lithium, cesium, and rubidium salts.
62. (Currently amended) The method of claim 61, wherein the alkali-metal salt is a lithium salt.
63. (Currently amended) The method of claim 62, wherein the alkali-metal salt is lithium chloride
64. (Canceled)
65. (Currently amended) The method of claim 45 ~~60~~, wherein the alkali-metal salt is present at a concentration of between 4 - 10 M.
66. (Previously presented) The method of claim 45, wherein the amphiphilic reagent is a detergent.
67. (Previously presented) The method of claim 45, wherein the detergent is a non-ionic detergent
68. (Previously presented) The method of claim 67, wherein the non-ionic detergent is

selected from the group consisting of tweens, tritons, nomodets, and tergitols.

69. (Previously presented) The method of claim 45, wherein the RNA Lysing Solution comprises a chelating agent.
70. (Previously presented) The method of claim 69, wherein the chelating agent is selected from the group consisting of EDTA and CDTA.
71. (Previously presented) The method of claim 45, wherein the RNA that is purified is substantially undegraded RNA.